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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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02/09/2005

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EXAMINER

GRAHAM, ANDREW R

ART UNIT

PAPER NUMBER

2644

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/734,475	Applicant(s) YUEN ET AL.	
	Examiner Andrew Graham	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) 11-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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DETAILED ACTION

*Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-6 and 18-21, drawn to a method of delivering surround sound audio signals over the Internet, classified in class 700, subclass 94.
- II. Claims 11-17, drawn to an audio correction system for enhancing spatial frequency response characteristics of reproduced sound, classified in class 381, subclass 17.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as playback of streaming media that is not image corrected or involved with rights management authorization. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with John King on February 1, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-6 and 18-21. Affirmation of this

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election must be made by applicant in replying to this Office action. Claims 11-17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### *Information Disclosure Statement*

2. The information disclosure statement filed March 21, 2001 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. Specifically, no explanation of relevance is provided for reference WO 96/16548. The reference includes an English translation of the abstract of the application; however, as the reference pertains to a "Disinfecting or antiseptic composition", this translation of the abstract does not convey the requisite relevance of the reference. It has been placed in the application file, but the information referred to therein has not been considered.

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*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (USPN 6694027) in view of Fitch et al (USPN 6647389). Hereafter, "Fitch et al" will be referred to as "Fitch".

Schneider teaches an encode and decode matrix system that may be utilized with the storage or transmission of data.

Regarding Claim 1, Schneider teaches:

A method of delivering a surround-sound audio signal (eleven channels; col. 4, lines 17-21) lines over the Internet to a client using conventional Internet stereo sound streaming techniques (transmitted using conventional transmission formats, known formats disclosed as including two channel transmission media over internet; col. 1, lines 23-33; col. 5, lines 44-46) while maintaining compatibility with multiple audio signal sources (property of 5-2-5 encoding and decoding; col. 4, lines 21-25)

the method comprising:

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providing a multi-channel audio signal source (eleven channels, 11A-14A, 23, 11C-14C) left mid surround 15A channels; col. 5, lines 16-26) at a first Internet broadcast location (transmitted using conventional transmission formats, known formats disclosed as including two channel transmission over internet; col. 1, lines 23-33; col. 5, lines 44-46; physical "location" inherent to implementation of encoder system of Figure 3A)

encoding (with 10A,10B,20) the multi-channel audio signal source into a two-channel format (5-2-5 matrix encoded output of encoder 20; two channel transmission format disclosed by Schneider; col. 1, lines 23-33; col. 4, lines 35-37),

converting the encoded two-channel audio signal source (result of 5-2-5 matrix encoding aspect of 20) to a streaming format for transmission over the Internet (also function of 20; col. 4, lines 35-37; col. 5, lines 37-40 and 44-46; Figure 3A),

transmitting the streaming format (col. 5, lines 44-46) of the encoded audio signal source to a client location (site of physical implementation of system comprising decoder of Figure 3B in internet audio transmission arrangement);

recovering the streaming format of the encoded audio signal into an encoded two-channel audio format (function of 30, two channels necessary for complementary 5-2-5 decoding aspect of 30; col. 4, lines 35-39)

decoding the two-channel format (two encoded channels from transmission stream initially encoded by 5-2-5 encoder (20); col. 1,

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lines 23-33; col. 4, lines 35-39) of the audio signal into a multi-channel audio output signal (outputs 43A-47A, 34, 43B-47B) for playback by the client (application of the signal to system outputs; col. 5, lines 53-67; col. 6, lines 1-13),

As noted above, Schneider teaches that such a system may be utilized with conventional transmission formats (col. 5, lines 44-46). Schneider also teaches that transmission media include two discrete channel media, and that existing transmission systems include internet audio.

However, Schneider does not clearly specify:

- that the method further comprises permitting the client to access, decode, and playback a plurality of types of audio source signals from a second Internet broadcast location where the relative quality of the resulting audio output signals are dependent upon the formats of the original audio source signals.

Fitch discloses a system involving internet audio transmission, wherein multiple streams are available to a receiving or client computer, and a user of the system may select from a plurality of streams for playback.

Specifically regarding Claim 1, Fitch teaches:

permitting the client to access, decode, and playback a plurality of types of audio source signals (col. 6, lines 1-15) from a second Internet broadcast location (col. 5, lines 58-66)

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where the relative quality of the resulting audio output signals are dependent upon the formats of the original audio source signals (codec may be rated, col. 8, lines 59-67; indication of stereo format, col. 8, line 27; stream characteristics include number of audio channels used by stream, col. 12, lines 20-23).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include the multichannel encoded audio stream of Schneider as part of a larger, internet audio transmission system comprising multiple, additional media streams, including those with different encodings and different geographical origins, such as disclosed in the system of Fitch. The motivation behind such an implementation would have been such additional streams would have enabled a user to select up to date media content. Differently formatted streams would have enabled streams to be rated and ranked based at least in part on user-perceived quality of the stream format. Access to differently encoded stream formats would have also enabled streams to be filtered for user access based on the user's equipment profile. Access to multiple streams from different server locations would have prevented regional outages from interfering with user access to the streams.

Regarding Claim 2, Fitch particularly teaches:

the plurality of types of audio source signals includes conventional stereo signals ("Stereo Flag", col. 7, lines 23-26; col.



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8, line 27). It is further noted that the applicant has listed stereo audio as a prior art distribution format (page 1, lines 18-20).

Regarding Claim 3, Schneider in view of Fitch teaches:

the plurality of types of audio source signals includes Dolby surround encoded audio signals (Schneider teaches that Dolby formats are known in the prior art, col. 1, lines 33-38; Fitch teaches the use of a plurality of different codecs in a user system, and that the same media may be encoded with different codecs, col. 5, lines 1-15 and 58-61; implementing a media stream in a Dolby surround format would have increased the number of formats available to a user, broadening selection available to meet a user's personal selection or hardware profile. It is further noted that the applicant has disclosed Dolby surround formats as being available in prior art (page 2, lines 6-7).

Regarding Claim 4, Fitch teaches:

the plurality of types of audio source signals includes a monaural signal (by virtue of no "Stereo Flag" or stereo signal being not present, col. 7, lines 23-26; col. 8, line 27). It is further noted that the applicant has listed monophonic audio as a prior art distribution format (page 1, lines 18-20).

Regarding Claim 5, Fitch teaches:

the client represents an individual personal computer user (col. 1, lines 49-65; col. 4, lines 10-19).

Regarding Claim 6, Schneider teaches:

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encoding the multi-channel audio signal source into a two-channel format is performed using the CS 5.1 encoding method (col. 4, lines 17-25; col. 5, lines 10-16).

Regarding Claim 21, please refer above to the rejection of the similar limitations of Claim 1, noting the components from the references cited therein.

4. Claims 18-20 are rejected as being unpatentable over Schneider as applied above, and in further view of Scofield et al (USPN 5841879). Hereafter, "Scofield et al" will be referred to as "Scofield".

As discussed above, Schneider teaches an encode and decode matrix system that may be utilized with the storage or transmission of data.

Regarding Claim 18, Schneider teaches:

A method of delivering a surround-sound audio signal (eleven channels; col. 4, lines 17-21) lines over the Internet to a client using conventional Internet stereo sound streaming techniques (transmitted using conventional transmission formats, known formats disclosed as including two channel transmission media over internet; col. 1, lines 23-33; col. 5, lines 44-46) while maintaining compatibility with multiple audio signal sources (property of 5-2-5 encoding and decoding; col. 4, lines 21-25)

the method comprising:

providing a multi-channel audio signal source (eleven channels, 11A-14A, 23, 11C-14C) left mid surround 15A channels; col. 5, lines

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16-26) at a first Internet broadcast location (transmitted using conventional transmission formats, known formats disclosed as including two channel transmission over internet; col. 1, lines 23-33; col. 5, lines 44-46; physical "location" inherent to implementation of encoder system of Figure 3A)

encoding (with 10A,10B,20) the multi-channel audio signal source into a two-channel format (5-2-5 matrix encoded output of encoder 20; two channel transmission format disclosed by Schneider; col. 1, lines 23-33; col. 4, lines 35-37),

converting the encoded two-channel audio signal source (result of 5-2-5 matrix encoding aspect of 20) to a streaming format for transmission over the Internet (also function of 20; col. 4, lines 35-37; col. 5, lines 37-40 and 44-46; Figure 3A),

transmitting the streaming format (col. 5, lines 44-46) of the encoded audio signal source to a client location (site of physical implementation of system comprising decoder of Figure 3B in internet audio transmission arrangement);

recovering the streaming format of the encoded audio signal into an encoded two-channel audio format (function of 30, two channels necessary for complementary 5-2-5 decoding aspect of 30; col. 4, lines 35-39)

decoding the two-channel format (two encoded channels from transmission stream initially encoded by 5-2-5 encoder (20); col. 1, lines 23-33; col. 4, lines 35-39) of the audio signal into a multi-channel audio output signal (outputs 43A-47A, 34, 43B-47B)

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(application of the signal to system outputs; col. 5, lines 53-67; col. 6, lines 1-13),

However, Schneider does not specify:

processing said multi-channel surround sound audio output to produce a two-channel audio output, said two-channel audio output configured to simulate said multi-channel surround sound audio output when played on a pair of loudspeakers.

Scofield discloses a system that imparts virtual positioning of sound through the use of at least a pair of speakers.

Regarding Claim 18, Scofield teaches:

processing said multi-channel surround sound audio output (226) to produce a two-channel audio output (connection to 58,60), said two-channel audio output configured to simulate said multi-channel surround sound audio output when played on a pair of loudspeakers (58,60) (col. 11, lines 41-67; col. 12, lines 1-25).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to process the multiple channel output of the system of Schneider with the binaural channel processors and the summing circuits of Scofield to form a two channel output. Such processing and corresponding speaker arrangement would have enabled a three dimensional positioning of multi-channel sound that requires only two output speakers and does not operate as a function of the user's physical position between the standard physical positions for the multi-channel playback speakers.

Regarding Claim 19, Schneider teaches:

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said encoding comprises encoding using a CS 5.1 encoder (col. 4, lines 21-23).

Regarding Claim 20, Schneider teaches:

said decoding comprises decoding using a CS 5.1 decoder (col. 4, lines 23-25 and 37-47).

#### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham whose telephone number is 703-308-6729. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (703)305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AG

Andrew Graham  
Examiner  
A.U. 2644

ag  
February 2, 2005



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**